

What Is Claimed Is:

1. A sensor for measuring a force, comprising:
  - a first sealed volume defined by a first body portion;
  - a second sealed volume defined by a second body portion;
  - a pressure diaphragm having a first side and a second side, wherein a pressure of the first sealed volume acts on the first side, and wherein a pressure of the second sealed volume acts on the second side; and
  - a force diaphragm exposed to a force, wherein the pressure of the first volume is dependent on the force acting on the force diaphragm.
2. The sensor as recited in claim 1, wherein the first sealed volume and the second sealed volume have substantially the same temperature.
3. The sensor as recited in claim 2, wherein the first and second sealed volumes are hermetically sealed.
4. The sensor as recited in claim 1, further comprising:
  - a mechanical stop.
5. The sensor as recited in claim 1, further comprising:
  - a strain gauge connected to the pressure diaphragm.
6. A method of measuring a pressure, comprising:
  - providing a first sealed volume defined by a first body portion;
  - providing a second sealed volume defined by a second body portion;
  - applying a pressure of the first sealed volume to a first side of a pressure diaphragm;

applying a pressure of the second sealed volume to a second side of the pressure diaphragm; and exposing a force diaphragm to a force; wherein the pressure of the first volume is dependent on the force acting on the force diaphragm.

7. The method as recited in claim 6, further comprising:  
providing the first sealed volume and the second sealed volume with substantially the same temperature.
8. The method as recited in claim 6, wherein the first and second sealed volumes are hermetically sealed.